CLAIMS

1. A computer-implemented architecture comprising:

one or more first objects that support only static properties; and

one or more second objects associated with the one or more first objects and configured to call the one or more first objects to effect one or more property value changes on the one or more first objects in a manner that makes the one or more first objects appear as if they support dynamic properties.

2. The computer-implemented architecture of claim 1, wherein the one or more second objects are configured to maintain property data that is used to call the one or more first objects.

3. The computer-implemented architecture of claim 2, wherein the property data comprises at least one property value change that is to be made.

4. The computer-implemented architecture of claim 2, wherein the property data comprises a time at which a property value change is to be made.

5. The computer-implemented architecture of claim 2, wherein the property data comprises how a property value change is to be made.

6.   The computer-implemented architecture of claim 2, wherein the property data comprises one or more of the following: at least one property value change that is to be made, a time at which a property value change is to be made, and how a property value change is to be made.

7.   The computer-implemented architecture of claim 2, wherein the property data comprises at least one property value change that is to be made, a time at which a property value change is to be made, and how a property value change is to be made.

8.   The computer-implemented architecture of claim 1 further comprising one or more data structures associated with the one or more second objects, individual data structures containing data that is to be used by the one or more second objects to effect a property value change.

9.   The computer-implemented architecture of claim 8, wherein the one or more data structures comprise an array of one or more sets of data structures, each set of data structures being associated with a property that is to be changed and containing property data that is to be used to change property values for a property.

10.   The computer-implemented architecture of claim 9, wherein the property data comprises at least one property value change that is to be made.

11. The computer-implemented architecture of claim 9, wherein the property data comprises a time at which a property value change is to be made.

12. The computer-implemented architecture of claim 9, wherein the property data comprises how a property value change is to be made.

13. The computer-implemented architecture of claim 9, wherein the property data comprises at least one property value change that is to be made, a time at which a property value change is to be made, and how a property value change is to be made.

14. Software code embodied on a computer-readable medium which, when executed by a computer, implements the system of claim 1.

15. A multi-media editing application comprising the computer-implemented system of claim 1.

16. A multi-media project editing architecture comprising:

one or more first objects that support only static properties, the one or more first objects being configured to implement a transform associated with processing of a multi-media editing project;

one or more second objects associated with the one or more first objects and configured to call the one or more first objects to effect one or more property value changes on the one or more first objects in a manner that makes the one or more first objects appear as if they support dynamic properties; and

one or more data structures associated with the one or more second objects, individual data structures containing property data that is to be used by the one or more second objects to effect a property value change.

17. The multi-media project editing architecture of claim 16, wherein the one or more data structures comprise an array of one or more sets of data structures, each set of data structures being associated with a property whose values are to be changed and containing property data that is to be used to change property values for a property.

18. The multi-media project editing architecture of claim 17, wherein the property data comprises at least one value to which a property is to be changed.

19. The multi-media project editing architecture of claim 17, wherein the property data comprises a time at which at least one property value is to be changed.

20. The multi-media project editing architecture of claim 17, wherein the property data comprises how at least one property value is to be changed.

21. The multi-media project editing architecture of claim 17, wherein the property data comprises: at least one value to which a property is to be changed, a time at which at least one property value is to be changed, and how at least one property value is to be changed.

22. Software code embodied on a computer-readable medium which, when executed by a computer, implements the system of claim 16.

23. A multi-media editing application comprising the computer-implemented system of claim 16.

24. A multi-media project editing architecture comprising:

a software-implemented matrix switch having multiple input pins and multiple output pins, the multiple input pins being routable to the multiple output pins, the switch being configured to provide a data stream that represents a multi-media project;

a data structure associated with the matrix switch and configured for use in programming the matrix switch to provide a routing scheme for routing input pins to output pins;

one or more first objects associated with the matrix switch, the one or more first objects supporting only static properties associated with rendering of a multi-media project;

one or more second objects associated with the one or more first objects and configured to call the one or more first objects to effect one or more property value changes on the one or more first objects in a manner that makes the one or more first objects appear as if they support dynamic properties.

25. The multi-media project editing architecture of claim 24 further comprising one or more data structures associated with the one or more second objects, individual data structures containing data that is to be used by the one or more second objects to effect a property value change.

26. The multi-media project editing architecture of claim 25, wherein the one or more data structures comprise an array of one or more sets of data structures, each set of data structures being associated with a property whose values is to be changed and containing property data that is to be used to change property values.

27. The multi-media project editing architecture of claim 26, wherein the property data comprises a property value of a property that is to be changed.

28. The multi-media project editing architecture of claim 26, wherein the property data comprises a time at which a property value is to be changed.

29. The multi-media project editing architecture of claim 26, wherein the property data comprises how a property value is to be changed.

30. The multi-media project editing architecture of claim 26, wherein the property data comprises a property value of a property that is to be changed, a time at which a property value is to be changed, and how a property value is to be changed.

31. A property value-changing method comprising:

providing one or more objects that support only static properties;

providing one or more programmable objects configured to effect property value changes on the objects that support only static properties; and

effecting at least one property value change on the one or more objects that support only static properties using the one or more programmable objects.

32. The method of claim 31 further comprising programming the one or more programmable objects with property data that is to be used by the one or more programmable objects to effect said at least one property value change.

33. The method of claim 32, wherein the property data comprises one or more property values that are to be changed.

34. The method of claim 32, wherein the property data comprises a time at which a property value is to be changed.

35. The method of claim 32, wherein the property data comprises how a property value is to be changed.

36. The method of claim 32, wherein the property data comprises one or more property values that are to be changed, a time at which a property value is to be changed, and how a property value is to be changed.

37. The method of claim 32 further comprising organizing the property data in one or more data structures that are used by the one or more programmable objects.

38. The method of claim 32 further comprising organizing the property data in one or more data structures that are used by the one or more programmable objects, said organizing comprises defining an array of data structures, each array comprising one or more sets of structures and each set being associated with a property whose value can change.

39. The method of claim 31, wherein said effecting comprises calling the one or more objects that support only static properties with the one or more programmable objects.

40. One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 31.

41. A property value-changing method comprising:

programming a programmable object with property data that defines when certain property value changes are to be made and what those property value changes are;

calling, with the programmable object, one or more objects that do not support dynamic properties; and

responsive to said calling, using the property data to effect a property value change on the one or more objects that do not support dynamic properties.

42. The method of claim 41 further comprising calling the programmable object with a time value, the programmable object using the time value to ascertain when to call the one or more objects.

43. The method of claim 41, wherein said programming comprises arranging the property data in a data structure array comprising one or more sets of data structures, each set of data structures being associated with a property whose value is to be changed.

44. One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 41.

45. One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

provide one or more objects that support only static properties;

provide one or more programmable objects configured to effect property value changes on the objects that support only static properties;

program the one or more programmable objects with property data that is to be used by the one or more programmable objects to effect said at least one property value change, the property data comprising: property value changes that

are to be made, time(s) at which property value changes are to be made, and how the property value changes are to be made; and

effect at least one property value change on the one or more objects that support only static properties by using the one or more programmable objects to call the one or more objects that support only static properties.

46. A property value-changing method comprising:

programming a programmable object with property data that defines when certain property value changes are to be made and what those property value changes are, the property value changes being associated with rendering of a multi-media editing project;

calling, with the programmable object, one or more objects that do not support dynamic properties; and

responsive to said calling, using the property data to effect a property value change on the one or more objects.

47. The method of claim 46 further comprising calling the programmable object with a current time, the programmable object using the current time to ascertain when to call the one or more objects.

48. The method of claim 46, wherein said programming comprises arranging the property data in a data structure array comprising one or more sets of data structures, each set of data structures being associated with a property whose value is to be changed.

49. The method of claim 46, wherein the property data defines how the property value changes are to be made.

50. One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 46.

51. A property value-changing method comprising:

providing one or more objects that support only static properties; and

simulating dynamic properties with the one or more objects by changing one or more property values at a pre-programmed time.

52. The method of claim 51, wherein said simulating comprises pre-programming at least one property value change, a time at which the property value is to be changed, and a manner in which the property value change it to take place.

53. The method of claim 52, wherein said pre-programming comprises pre-programming a computer-implemented object to call the one or more objects at an appropriate time to change the one or more property values.

54. Software code comprising a multi-media project editing application configured to implement the method of claim 51.

55. A multi-media system comprising:

an application program configured to enable a user to define a multi-media project in which multiple digital source streams can be combined;

a software-implemented matrix switch having multiple input pins and multiple output pins, the input pins being individually associated with inputs that can compete, during a common time period, for a particular output pin that is associated with the matrix switch, the switch being configured to receive, at its input pins, digital source streams;

a first data structure associated with the matrix switch and configured for use in programming the matrix switch to provide a routing scheme for routing input pins to output pins such that at any given time, only one input pin is routed to the particular output pin;

a second data structure associated with and different from the first data structure, the second data structure representing a user-defined multi-media project and being configured so that the first data structure can be derived therefrom;

one or more first objects associated with the matrix switch, the one or more first objects supporting only static properties associated with rendering of a multi-media project; and

one or more second objects associated with the one or more first objects and configured to call the one or more first objects to effect one or more property value changes on the one or more first objects in a manner that makes the one or more first objects appear as if they support dynamic properties.

56. The multi-media system of claim 55 further comprising one or more data structures associated with the programmable object(s), individual data structures containing data that is to be used by the programmable object(s) to effect a property value change.

57. The multi-media system of claim 56, wherein the one or more data structures comprise an array of one or more sets of data structures, each set of data structures being associated with a property value that is to be changed and containing property data that is to be used to change that property value.

58. The multi-media system of claim 56, wherein the one or more data structures comprise an array of one or more sets of data structures, each set of data structures being associated with a property whose value is to be changed and containing property data that is to be used to change that property value, the property data comprising: a property value that is to be changed, a time at which the property value is to be changed, and a manner in which the property value is to be changed.